REMARKS

In the final Office Action of April 16, 2003, claim 10 was objected to as being dependent on a rejected base claim, but the Examiner indicated it would be allowable if re-written in independent form. Claims 1-2, 5-6, 12 and 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,286,296 to Sato *et al.* (hereinafter "Sato") in view of U.S. Patent No. 4,997,364 to McGrath *et al.* (hereinafter "McGrath"). Claims 7-9 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sato and McGrath in view of U.S. Patent No. 3,866,926 to Traum. Claims 13, 16 and 21 were rejected under 35 U.S.C. §103(a) as unpatentable over Sato and McGrath in view of U.S. Patent No. 5,980,991 to Sakamoto *et al.* (hereinafter "Sakamoto"). Claims 14-15 and 17 were rejected under 35 U.S.C. §103(a) as unpatentable over Sato, McGrath and Sakamoto in view of U.S. Patent No. 4,531,047 to Canfield et al. (hereinafter "Canfield"). Claim 18 was rejected under 35 U.S.C. §103(a) as unpatentable over Sato, McGrath, Sakamoto and Canfield in view of Japanese Patent No. 01-082453 to Okubo et al. (hereinafter "Okubo").

In the present amendment, claim 10 has been cancelled and rewritten as claim 22 in independent form as suggested by the Examiner. Claim 12 has been amended to improve clarity. No new matter has been added. After entry of this amendment, the pending claims are: 1-2, 5-9 and 11-22.

Applicants appreciate the Examiner's withdrawal of the objections and rejections of the claims in the previous office action.

Claims 1 and 20. Claims 1 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sato in view of McGrath. The Examiner relies on Sato to teach the invention recited in claims 1 and 20, but concedes that Sato fails to teach the thermally isolating interface having a face with a border disposed on the face, the border defining a hole in the thermally isolating interface having dimensions such that the substrate is transferable through the interface. Sato also fails to teach a thermally isolating interface made of a metal having a thermal conductivity coefficient of less than 1536 Btu inch/(hr)(ft^2)(°F). For these elements, the Examiner attempts to rely on the baffle gate chambers of McGrath (*e.g.*, chamber 12, Fig. 1). McGrath teaches an assembly for reflowing solder on printed circuit boards (PCBs) in an open furnace system. The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made to have combined the baffle gate chambers of McGrath with the multi-

chamber equipment of Sato. The Examiner reasons that the baffle gate chambers in McGrath are equivalent to the thermally isolating interface recited in pending claims 1 and 20.

Applicants respectfully traverse the rejection. There is no motivation to combine Sato and McGrath, as each focuses on a separate and distinct problem from each other and from the claimed invention. Neither Sato nor McGrath focuses on or addresses heat transfer through a chamber structure. The claimed thermally isolating interface limits such heat transfer. Applicants' invention is directed to a separate and distinct problem and an approach to solving the problem that are not even addressed by Sato and McGrath. Sato is concerned with cross-contamination of gases, particles and moisture between wafer processing chambers. Therefore, Sato relies on gate valves to seal chambers by closing ports into passageways and on vacuum pumps to control pressure between chambers. The Examiner asserts that Sato's vacuum valves (Fig. 1 (2); col.4, line 18) teach a thermally isolating interface. However, as correctly noted by the Examiner, Sato's vacuum valves reduce heat only when closed. In contrast, the claimed thermally isolating interface isolates heat transfer from one chamber to another chamber through the chamber interface whether or not the passageway is closed off. In further contrast, McGrath deals with air flow and ambient temperature problems in an open furnace system for reflowing PCBs. McGrath uses baffle gate chambers to control air flow through the open ends of the furnace. There is no motivation to combine Sato and McGrath, because doing so would not serve to solve the problems that either reference is intended to address. McGrath's baffle gate chambers would not serve to limit gases and particle contaminants from traveling between chambers, and Sato's gate valves would not allow PCBs to travel through the system.

Furthermore, McGrath's baffle gate chambers are not intended for use in a sealed environment having an internal pressure that is less than standard atmospheric pressure. The open ends of McGrath's baffle gate chambers would destroy any sealed environment to which they are coupled. Sato uses different pressures in its vacuum chambers to limit cross contamination between the chambers. McGrath's baffle gate chambers do not form a seal that could maintain different pressures at its ends. The open nature of McGrath's baffle gate chambers would allow the pressures to even out between chambers, thereby destroying one of the main elements of the Sato system. This is a motivation not to combine McGrath into the sealed wafer processing chamber system of Sato.

Additionally, McGrath does not teach chambers coupled to two sides of an isolation apparatus. Whether in a first instance the entire furnace structure is considered as an interface in McGrath or in a second instance a single baffle gate chamber is considered,

McGrath does not teach an interface between two chambers. In the first instance there are no chambers shown on the outside ends of the baffle gate chambers in McGrath. In the second instance, even if the heating chamber in McGrath is considered as a chamber on one side of a baffle gate chamber, the other side of the baffle gate chamber is open and not coupled to a chamber of any kind. Thus, there is no motivation for one skilled in the art to look to McGrath for an interface between two wafer processing chambers.

For the above reasons, claims 1 and 20 are patentable over the cited art. Claims 2, 5-9 and 11-19 ultimately depend from claim 1. Thus, claims 2, 5-9 and 11-19 are patentable over the cited art for at least the same reasons that claim 1 is patentable over the cited art.

Claim 21. Claim 21 includes language similar to that in claims 1 and 20 regarding the thermally isolating interface. As stated above, there is no motivation to combine Sato and McGrath. The addition of Sakamoto does not provide such motivation. As such, claim 21 is patentable over the cited art.

New Claim 22. Claim 22 is original claim 10, which was indicated to be allowable, re-written in independent form to include claims 1 and 7 from which claim 10 depended.

In view of the foregoing, Applicants believe that all of the claims are now in condition for allowance and respectfully request the Examiner to pass the subject application to issue. If for any reason the Examiner believes any of the claims are not in condition for allowance, he is encouraged to phone the undersigned at (650) 849-7777 so that any remaining issues may be resolved.

No fee is believed due for filing this response. However, if a fee is due, please charge such fee to Pennie & Edmonds LLP's Deposit Account No. 16-1150.

Respectfully submitted,

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